

Amanda Bedard

Program 3

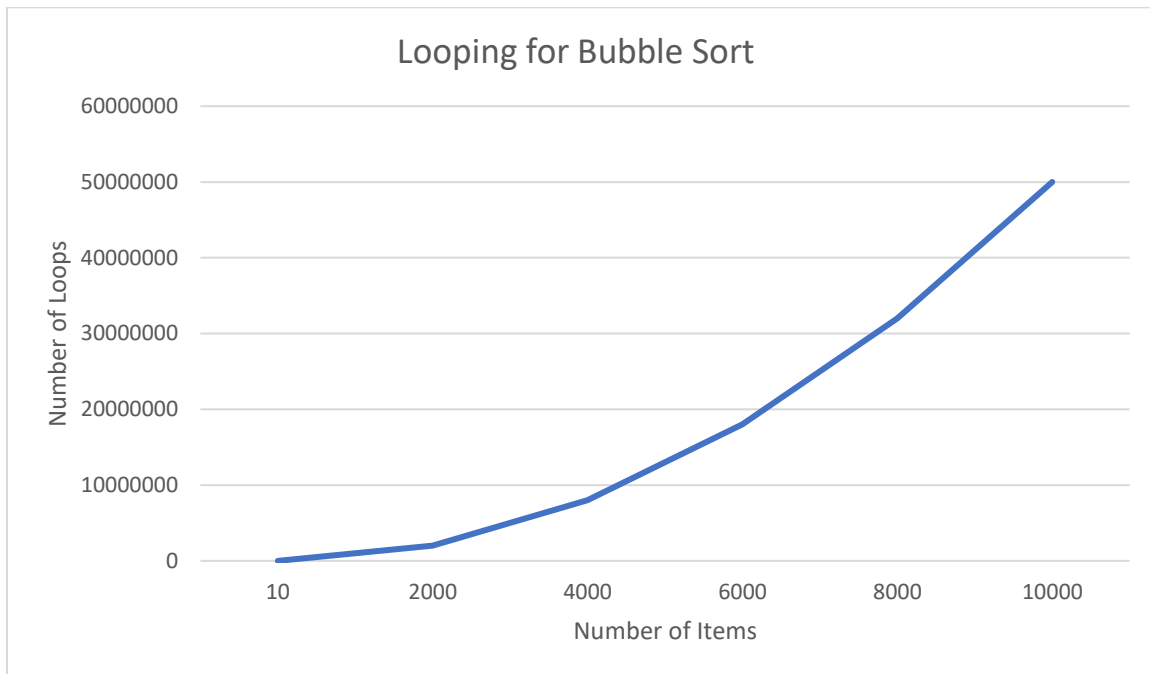
November 5, 2021

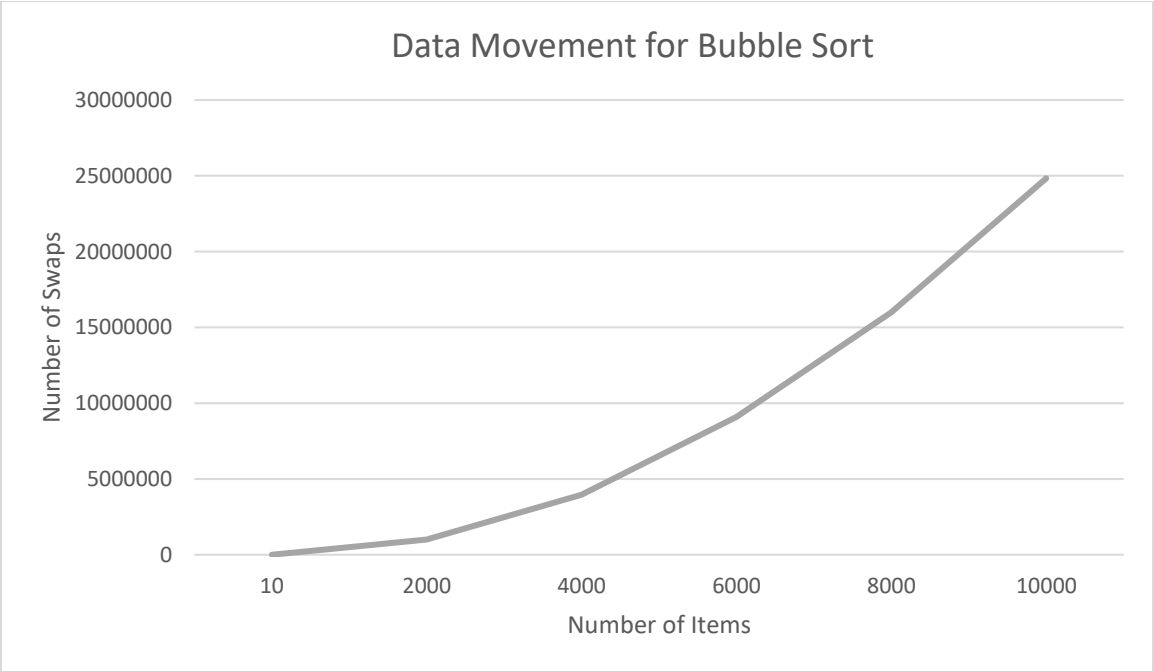
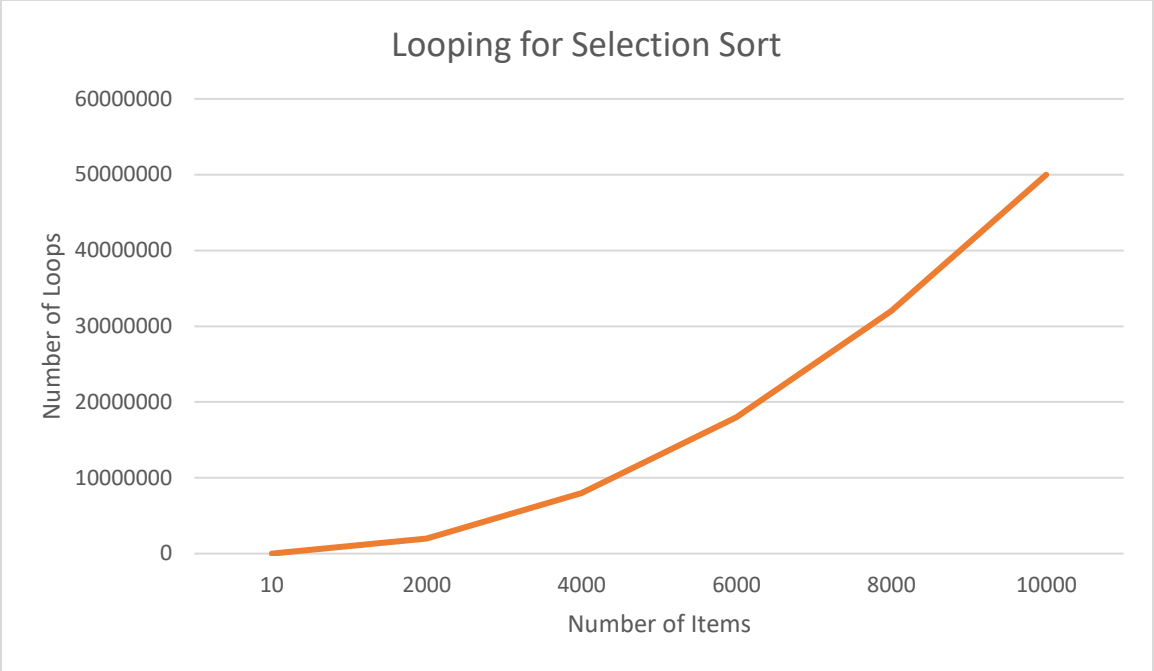
Project 3 Report

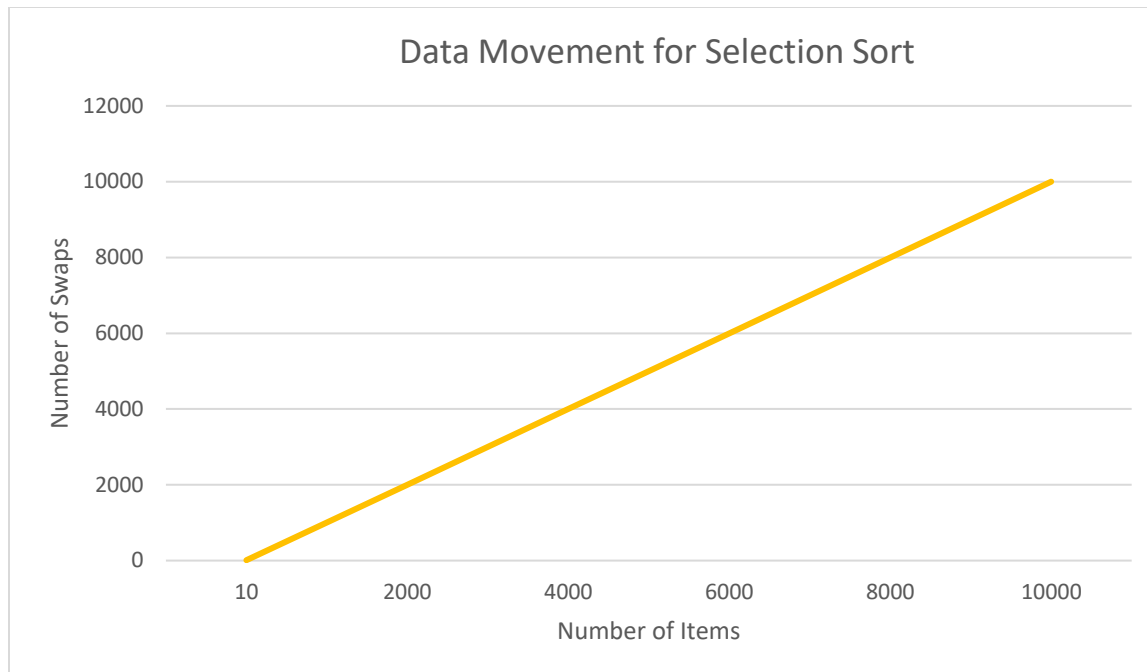
Data:

Number of Items	Bubble Sort		Selection Sort	
	Loop Count	Data Movement	Loop Count	Data Movement
10	45	22	45	10
2000	1999000	1007501	1999000	2000
4000	7998000	3948991	7998000	4000
6000	17997000	9098648	17997000	6000
8000	31996000	16001805	31996000	8000
10000	49995000	24835915	49995000	10000

Graphs:







Summary:

According to the code I have implemented, the conclusions I can draw is that they both use the same amount of loops to sort data, but data moves much more frequently in a bubble sort than a selection sort. The loops both increase exponentially, but while bubble sort's data movement increases exponentially, the movement in selection sort is linear.

After doing some web research, my results seem to match up with what I found on the internet. Selection sort is much faster compared to bubble sort, although bubble sort has a much better best-case scenario. Neither are very efficient when it comes to large datasets, but selection sort is definitely more efficient on average.

Resources:

<https://techdifferences.com/difference-between-bubble-sort-and-selection-sort.html>

<https://www.geeksforgeeks.org/selection-sort-vs-bubble-sort/>